

Shop Wed. 12/12

Dart Aerospace Ltd.

50
6

Date: Monday, 12/10/2007 12:05:02 PM
User: Kim Johnston

Process Sheet

Customer	CU-DAR001 Dart Helicopters Services	Drawing Name	SHORT STEP ASSEMBLY
Job Number	36238	Part Number	D350591121 D2351-04(
Estimate Number	11672	Drawing Number	D2351 UNDER REVIEW P4
P.O. Number	N/A	Project Number	N/A 07.12.10
This Issue	12/10/2007	S.O. No.	N/A
Prsht Rev.	NC	Type	LARGE FAB ASSY
First Issue	N/A	Material	N/A
Previous Run	35863	Due Date	12/12/2007 Qty: 1 Um: Each
Written By			
Checked & Approved By			
Comment	Est Rev E 02.10.21 Re-format; Incorporated D2351-041 IPP K J/RF est rev. F 06.02.23 added grinding EC		

Additional Product

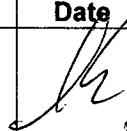
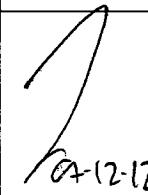
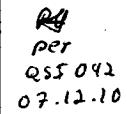
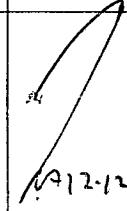
Job Number:



Seq. #:	Machine Or Operation:	Description:	
1.0	DC	DOCUMENT CONTROL	
		Comment: DOCUMENT CONTROL Photocopy bluefile and type labels as per PPP D350-591-121CHG003	
2.0	D224416	Step Extrusion	
		Comment: Qty.: 0.5000 Each(s)/Unit Total : 0.5000 Each(s) Pick: Qty Part Number Description Batch 0.5 D2244-128 Extrusion B33733 a.m 07.12.11 ①	
3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1	
		Comment: LARGE FABRICATION RESOURCE 1 54.94" 1-Cut D2244-128 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G a.m 07.12.11 ①	
		2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets. a.m 07.12.11 ① TURN OVER	
	3-Deburr	a.m 07.12.11 ①	
4.0	BENDING	BENDING MACHINE	
		Comment: BENDING MACHINE Bend per Dwg D2351 using Bend Program D23561dD FT011	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: Date: 07/12/10
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07.12.10	3.0	STEP IS TOO LONG WHEN INSTALLED ON AIRCRAFT 	R4 per QSS 042 07.12.10	SHORTEN STEP LENGTH BY 0.373" @ 99° CUT LENGTH IS NOW 54.94" (SEE ATTACHED PICTURES)	 07-12-12	 07-12-12	 R4 per QSS 042 07.12.10	 07-12-12

NOTE: Date & initial all entries

Date: * Monday, 12/10/2007 12:05:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 36238

Part Number: D350591121

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

12/07/12

6.0 D28501 End Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2850-1	End Bracket	329848

7.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel Fwd and Aft end for welding

12/07/12

2-Weld Aft End Bracket per QSI 004 & Dwg D2351 using Welding Jig DT8033
A/R Aluminum Rod 11050544

12/07/12

3-Do not Grind Flush

12/07/12

8.0 QC9 VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

12/07/12

9.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

12/07/12

10.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

12/07/12

11.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

12/07/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 12/10/2007 12:05:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services		Drawing Name: SHORT STEP ASSEMBLY
Job Number: 36238		Part Number: D350591121
Job Number:		
Seq. #:	Machine Or Operation:	Description :
12.0	D2582	Hi-Skid Step Leg Ass'y 
Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part Number Description Batch 1 D2582 Step Leg Assy <u>333253</u>		 <i>12/02/12</i>
13.0	MS20600AD4W3	Cherry Rivets 
Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s) Pick: Qty Part Number Description Batch 16 MS20600AD4W3 Rivet <u>1104715</u>		 <i>12/02/12</i>
14.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1 
Comment: LARGE FABRICATION RESOURCE 1 1-Rivet Leg Assembly as per Dwg D2351		 <i>12/02/12</i>
15.0	QC5	INSPECT WORK TO CURRENT STEP 
Comment: INSPECT WORK TO CURRENT STEP		 <i>12/02/12</i>
16.0	D267334	End Plate 
Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part Number Description Batch 1 D2673-34 End Plate <u>332404</u>		
17.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1 
Comment: LARGE FABRICATION RESOURCE 1 1-Weld Fwd End Plate per QSI 004 & Dwg D2351 A/R Aluminum Rod <u>121105058</u>		 <i>12/02/12</i>
2-Grind end cap flush per dwg D2351		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 12/10/2007 12:05:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 36238

Part Number: D350591121

Job Number:



Seq. #: Machine Or Operation:

Description :

18.0 QC9 VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

07/12/12 (1)

19.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

J-12-12 (1)

20.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



(process was +)

MJ 07-12-12

(x1)

Comment: HAND FINISHING RESOURCE #1

Touch up Alodine

21.0 POWDER COATING POWDER COATING



M105914

(1X)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M-J 07/12/12

22.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



(1X)

Comment: HAND FINISHING RESOURCE #1

Wing Walk per Dwg D2351 and QSI 005 4.4

Batch:

M106332

M-J 07/12/12

23.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



J-12-13 (1)

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

24.0 PACKAGING 1 PACKAGING RESOURCE #1



PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1

Pick Packing Kit

M-J ship w/heat only N/C

25.0 D22301 Mounting Lug



Mounting Lug

u

Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Packing KitQtyPart Number

1 D2230-1 Mounting Lug

Description

Batch

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 12/10/2007 12:05:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 36238

Part Number: D350591121

Job Number:



Seq. #: Machine Or Operation:

Description :

26.0 D22303 Mounting Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Packing KitQtyPart Number Description Batch

1 D2230-3 Mounting Lug _____



27.0 D2856400 Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total : 0.6000 f(s)

Pick:

Packing KitQtyPart Number Description Batch

1 D2856-400 7.20" Abrasion Strip _____



28.0 AN337A Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Packing KitQtyPart Number Description Batch

2 AN3-37A Bolt _____



29.0 AN413A Bolt



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)

AN4-13A

Batch: _____

W/A



30.0 AN960JD10 Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Packing KitQtyPart Number Description Batch

4 AN960JD10 Washer _____



31.0 AN960JD416 Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick:

Packing KitQtyPart Number Description Batch

6 AN960JD416 Washer _____



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 12/10/2007 12:05:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 36238

Part Number: D350591121

Job Number:



Seq. #: Machine Or Operation:

Description :

32.0 MS21042L3 Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Packing KitQtyPart Number Description Batch

2 MS21042L3 Nut (or -3)

33.0 MS21042L4 Nut



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)

Pick:

Packing KitQtyPart Number Description Batch

3 MS21042L4 Nut (or -4)

34.0 QC4 INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

35.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-121

Location: C

PPP Rev: 1

C 11/2/13 0

36.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

D 11/2/13 0

Job Completion



U 11/2/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN KE	DRAWN BY <i>PH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>ff</i>	APPROVED <i>ff</i>	DRAWING NO. D2351	REV. E	SHEET 1 OF 2
DATE 05.11.14		TITLE HIGH FLOAT STEP ASSEMBLY	SCALE NTS	
A	95.02.15	NEW ISSUE		
B	97.05.22	END CAPS CHANGED		
C	97.07.23	ADDED BUSHING AND FACING INFO		
D	98.12.17	CHANGED TO BEND, D2850 REPLACES D2357 & D2358, INCORP. DEO 9084		
E	05.11.14	UPDATE FINISHING NOTE		

D2351 HIGH FLOAT STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY -041	QTY -042
D2351-041	High Float Step Assembly (LH)	X	
D2351-042	High Float Step Assembly (RH)		X
D2244-55.4	STEP EXTRUSION*	1	1
D2582	STEP LEG ASSEMBLY	1	1
D2673-34	STEP END PLATE	1	1
D2850-1	END BRACKET	1	
D2850-2	END BRACKET		1
MS20600AD4W3	RIVETS	16	16

*cut per drawing

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *36238*

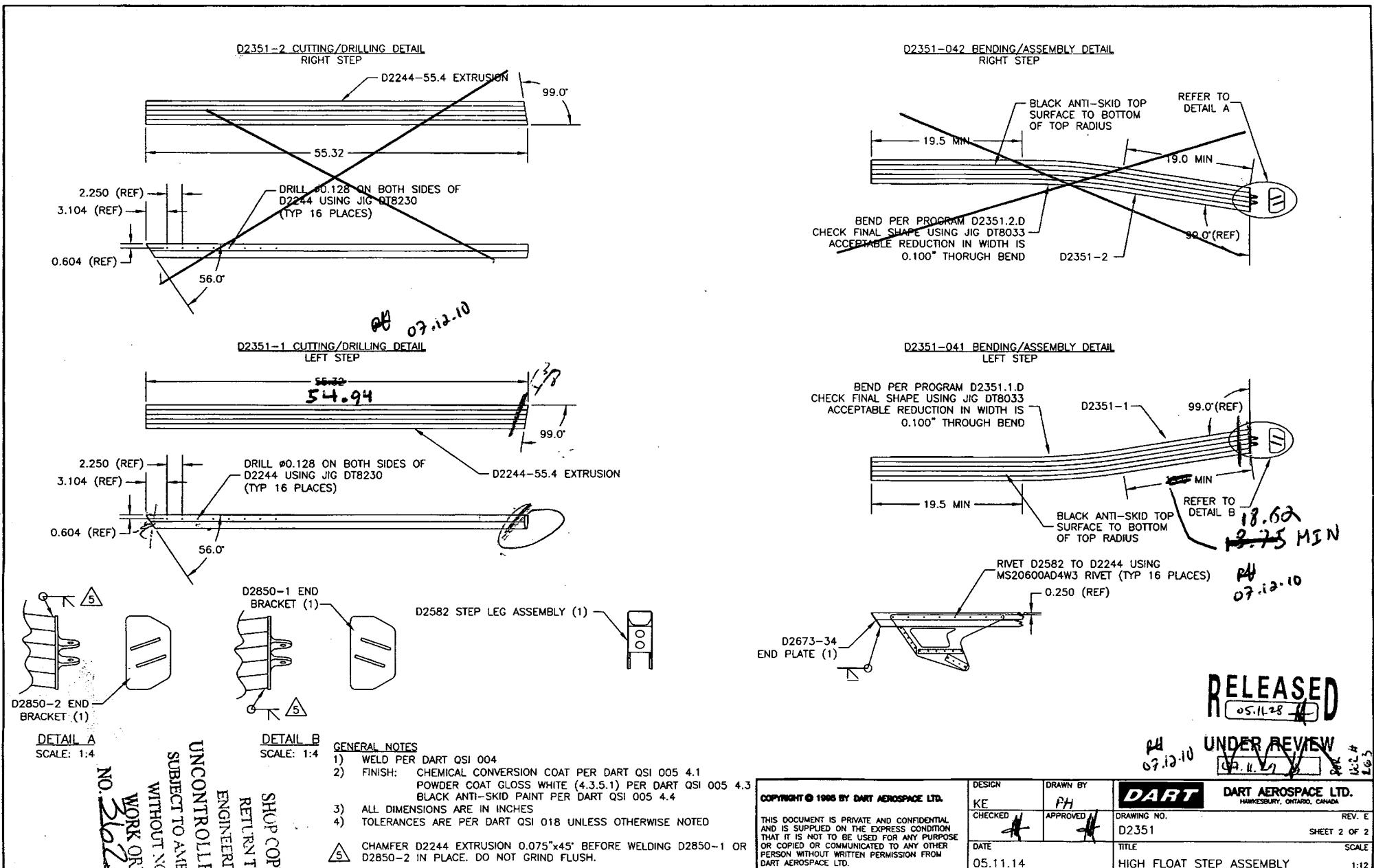
RELEASED
05.11.28 *ff*

UNDER REVIEW

07.11.29 *ff*
PER PUR # 263

Copyright © 1995 by DART AEROSPACE LTD

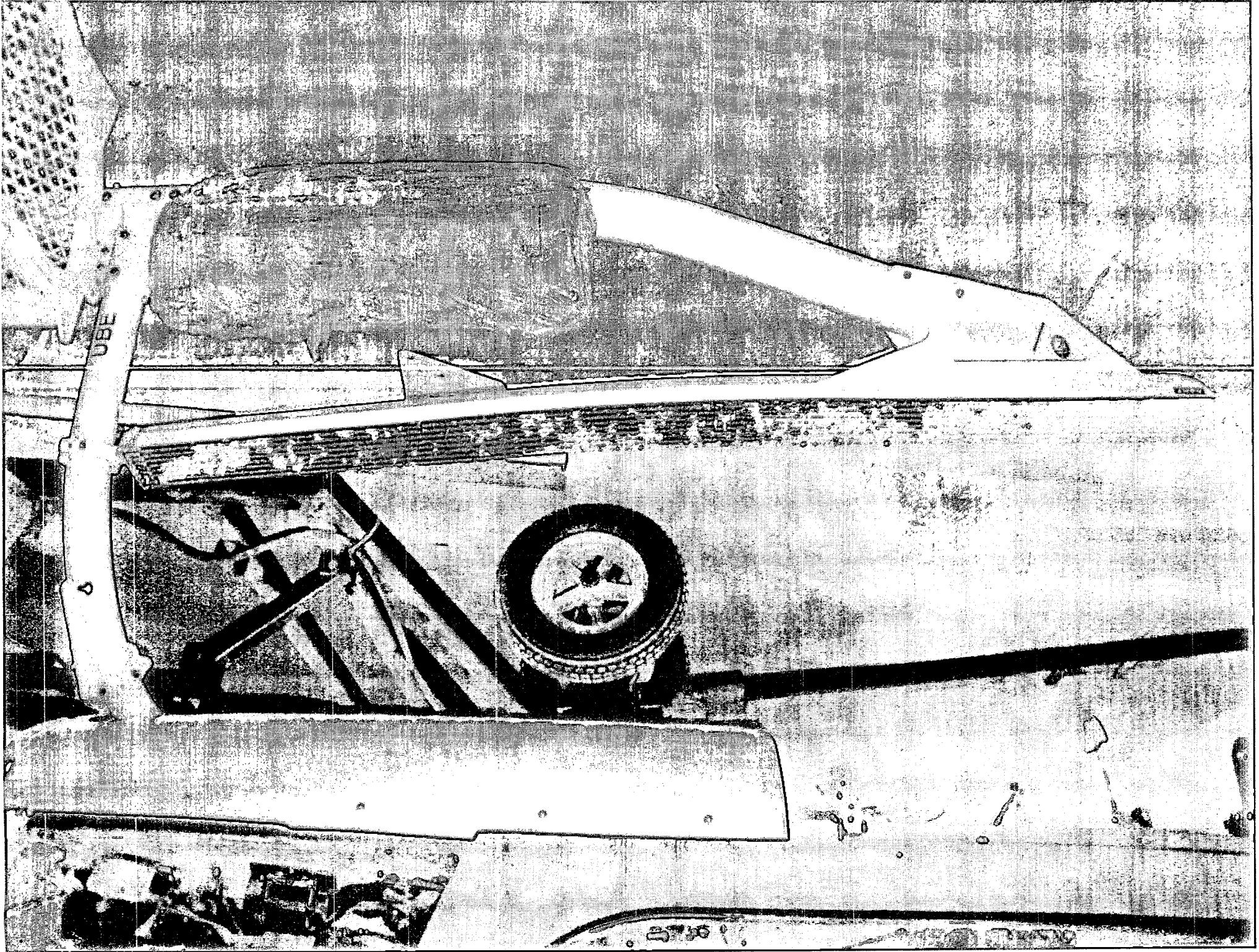
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

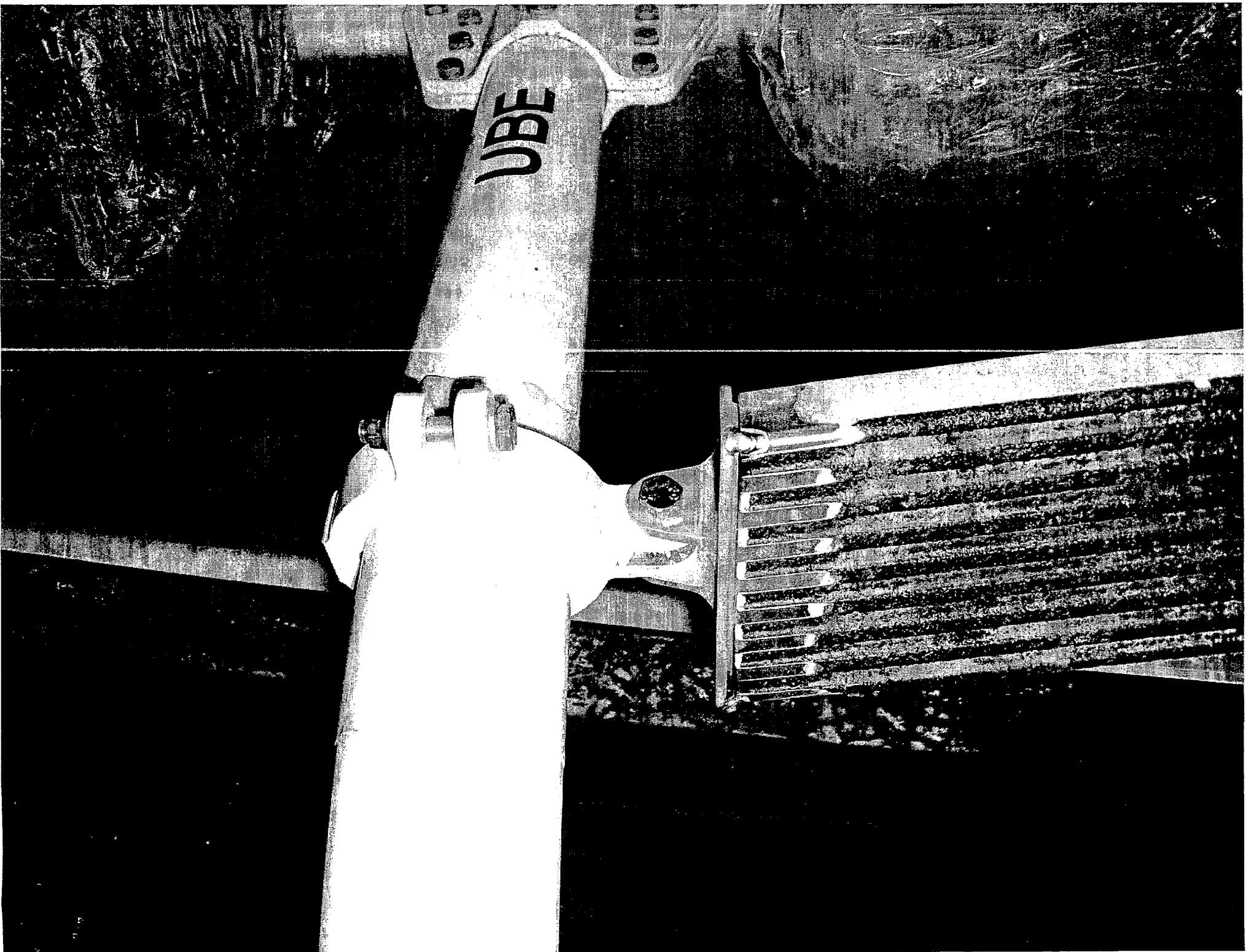


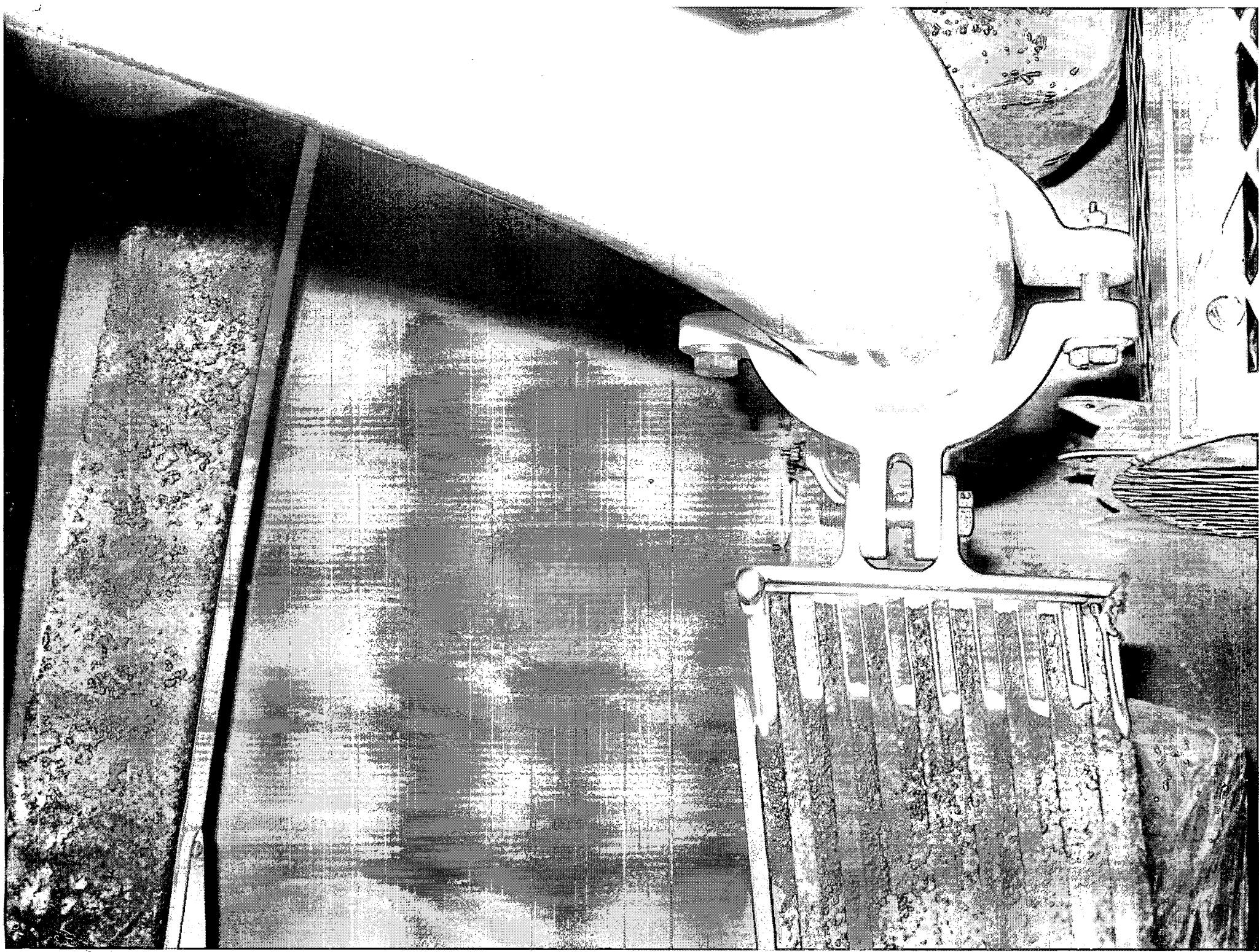
RELEASED
05.12.10

UNDER REVIEW

102-A
E63







Date: Monday, 12/10/2007 12:05:02 PM
 User: Kim Johnston

50

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services			Drawing Name	: SHORT STEP ASSEMBLY		
Job Number	: 36238						
Estimate Number	: 11672						
P.O. Number	:			Part Number	: D350591121		
This Issue	: 12/10/2007	S.O. No.	:	Drawing Number	: D2351 UNDER REVIEW		
Prsht Rev.	: NC			Project Number	: N/A		
First Issue	: / /	Type	: LARGE FAB ASSY	Drawing Revision	: E		
Previous Run	: 35863			Material	:		
Written By	:				Due Date	: 12/12/2007	Qty: 1 Um: Each
Checked & Approved By	: <u>JH</u> -07.12.10						
Comment	: Est Rev:E 02.10.21 Re-format; Incorporated D2351-041 IPP K J/RF est rev. F 06.02.23 added grinding EC						

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:	
1.0	DC	DOCUMENT CONTROL	
Comment: DOCUMENT CONTROL Photocopy bluefile and type labels as per PPP D350-591-121CHG003			07.12.10 <u>JH</u>
2.0	D2244116	Step Extrusion	
Comment: Qty.: 0.5000 Each(s)/Unit Total : 0.5000 Each(s) Pick: Qty Part Number Description Batch 0.5 D2244-128 Extrusion _____			<i>REFERENCE ONLY</i>
3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1	
Comment: LARGE FABRICATION RESOURCE 1 1-Cut D2244-128 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G 2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets. 3-Deburr			
4.0	BENDING	BENDING MACHINE	
Comment: BENDING MACHINE Bend per Dwg D2351 using Bend Program D23561dD FT011			

